

REMARKS

Claims 1-24 are pending. By this Amendment, claims 1, 5, 6, 7, 9, 11, 12, 13, 14, and 16 are amended, claim 10 is canceled without prejudice or disclaimer, and claims 21-24 are added. No new matter is added.

Support for the amendments to claims 1 and 9 is found at least in paragraph [0037] discussing the facing of the burr portion 27b toward the second electrode uncoated portion 27. Claim 9 is also amended to include the features of claim 10. Claims 5-7 and 12-14 are amended to clarify the recited subject matter. Claims 11-13 and 16 are amended to revise their respective dependency. Support for new claims 21-24 is found in their respective base claims reciting uncoated portions on at least one side of the electrode collector, and FIGS. 2 and 3 of the Drawings.

For the following reasons, reconsideration is respectfully requested.

REJECTION UNDER 35 U.S.C. §112:

On page 2, item 1 of the Office Action, claims 1-8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 6, and 7 are amended to obviate the rejection.

REJECTION UNDER 35 U.S.C. §102:

On page 3, item 3 of the Office Action, claims 1, 3-6, and 9-13 are rejected under 35 U.S.C. §102(e) as being anticipated by Takeuchi (U.S. Patent No. 6,951,576 B1). The rejection of canceled claim 10 is moot. As to the remaining claims, the rejection is respectfully traversed.

It is respectfully submitted that Takeuchi fails to disclose or suggest an electrode unit, wherein a folded portion is provided on at least one edge of at least one of the first electrode plate and the second electrode plate so as to have uncoated portions of the electrode plate face each other, as recited in claim 1.

Also, Takeuchi fails to disclose or suggest a secondary battery, wherein a folded portion is provided at the uncoated portion of either the first or the second electrode plate to have

uncoated portions of the electrode plate face each other, as recited in claim 9.

As an example, Takeuchi discloses an anode-cathode sub-assembly 40 that comprises of an elongated alkali metal anode 42, an elongated solid cathode 44, and a separator 46 therebetween in a face to face relationship which is wound on a mandrel to form a jellyroll type configuration (see, for example, col. 3, lines 31-38 and FIG. 4 of Takeuchi). Shown in FIGS. 5-7 of Takeuchi are an anode 62, a cathode 64, and a separator 66 that correspond to the anode 42, the cathode 44, and the separator 46, respectively.

Takeuchi fails to disclose that the cathode 64 has uncoated portions that face each other. Instead, Takeuchi simply discloses that the cathode 64 is fabricated by having an active material on both sides of an elongated screen (see, for example, col. 4, lines 27-28 of Takeuchi), or that tabs 86, 88 can be formed integral with current collector 84 or formed by removing sections of cathode material 82 where tabs 86, 88 are to be located and then attached by spot welding (see, col. 5, lines 33-37 of Takeuchi), without disclosing that uncoated portions of the cathode face each other.

Similarly, Takeuchi fails to disclose that the anode 62 has uncoated portions that face each other. Instead, Takeuchi simply discloses that the anode 62 is fabricated with lithium on a screen, and for highest efficiency, the lithium is on both sides of the screen where the anode 62 is on the inside of the wind and has the cathode 64 opposing both sides (see, col. 4, lines 28-32 of Takeuchi). Takeuchi discloses that the remainder of the anode 62 has lithium on only one side, the side facing the active cathode material (see, col. 4, lines 32-32 of Takeuchi), and where the anode faces the case or itself, the lithium is only on one side of the screen (see, col. 4, lines 32-35 of Takeuchi). These passages fail to disclose that uncoated portions of the anode face each other.

Finally, Takeuchi discloses that the innermost portion of the anode 42 is folded to face each other with only the separator therebetween (see, col. 3, lines 58-63), the winding or folding of anode 62, cathode 64, and separator 66 is performed using a mandrel represented diagrammatically at 68 (see, col. 4, lines 50-52 and FIG. 7 of Takeuchi), and the first fold is toward the anode where the anode is folded on itself (see, col. 4, lines 53-55 of Takeuchi), so that the wind continues to produce the sub-assembly 70 (see, col. 4, lines 70 of Takeuchi). Other than having a first fold of the anode, Takeuchi fails to which side of the anode is folded to form the first fold. Specifically, Takeuchi fails to disclose that uncoated portions of the anode face each other. Thus, as Takeuchi fails to disclose or suggest a cathode and an anode whose

uncoated portions face each other, Takeuchi fails to disclose or suggest that uncoated portions of the electrode plate face each other, as recited in claims 1 and 9.

Accordingly, Takeuchi fails to disclose or suggest each and every feature of claims 1 and 9, and claims 1 and 9 are patentably distinguishable over the applied reference. Additionally, claims 3-6, which depend from claim 1, and claims 11-13, which depend from claim 9, are likewise patentable distinguishable over the applied reference to Takeuchi for at least the reasons discussed above and for the additional features they recite.

Specifically, Takeuchi fails to disclose a burr of an edge of either the first or the second electrode collector, as called for in claims 5 and 12. Instead, Takeuchi discloses withdrawing of a mandrel that could tear the separator 66 (see, for example, col. 3, line 63-col. 4, line 3 of Takeuchi).

Also, FIG. 7 of Takeuchi discloses a separator 66 positioned within the fold of the anode 64 and rolled between the cathode 64 and the anode 62. Accordingly, Takeuchi fails to disclose or suggest a separator interposed between the folded portion and the first electrode plate, when the folded portion is of the second electrode plate, as called for in claims 6 and 13. FIG. 10, which is asserted in the Office Action to allegedly disclose the feature, discloses the overall jellyroll configuration and not the detailed view of the fold, the separator, and the plates, which is actually shown in FIG. 7.

Withdrawal of the rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §103:

On page 6, item 6 of the Office Action, claims 2, 7, 14, and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Takeuchi, in view of Iwasaki et al. (U.S. Patent No. 6,325,611 B1). The rejection is respectfully traversed.

As discussed above, Takeuchi fails to disclose or suggest each and every feature of claim 1, from which claims 2 and 7 depend, and claim 9, from which claims 14 and 16 depend. Iwasaki, which is applied for the asserted teaching of an insulating tape affixed to the electrode, fails to overcome the deficiency of Takeuchi. Accordingly, claims 2, 7, 14, and 16 are patentably distinguishable over the applied references for at least the reasons discussed above and for the additional features they recite. Withdrawal of the rejection is respectfully requested.

On page 7, item 7 of the Office Action, claims 8, 15, and 17-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Takeuchi, in view of Narukawa et al. (U.S. Patent No. 5,508,122). The rejection is respectfully traversed.

As discussed above, Takeuchi fails to disclose or suggest each and every feature of claim 1, from which claims 8, 17, and 19 depend, and claim 9, from which claims 15, 18, and 20 depend. Narukawa, which is applied for the asserted teaching of an inboard of 20 mm, fails to overcome the deficiency of Takeuchi. Accordingly, claims 8, 15, and 17-20 are patentably distinguishable over the applied references for at least the reasons discussed above and for the additional features they recite. Withdrawal of the rejection is respectfully requested.

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NEW CLAIMS:

New claims 21-24 are patentable over the applied references. Allowance is respectfully requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

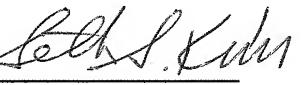
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

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By: 
Seth S. Kim
Registration No. 54,577

1400 Eye St., NW
Suite 300
Washington, D.C. 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-951